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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,417

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Adrian P. Stephens

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EXAMINER

CHERY, DADY

ART UNIT

PAPER NUMBER

2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/634,417	STEPHENS, ADRIAN P.	
	Examiner	Art Unit	
	Dady Chery	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the amendment filed on 07/05//2007.

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

- a. The applicant defines initiate a channel access as communicate over the channel such obtain permission to transmit data packet over the channel (See [0030]). Kanterakis teaches a method to initiate transmissions (access a channel) if a counter is exceeded a threshold or the timer is expired ,depending on which event is triggered (See abstract and Col. 10, lines 29 – Col. 11, lines 5). Furthermore, Kudo teaches a method for sequentially and selectively transmitting a plurality of queues (Abstract and claim 11).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 2616

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 - 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanterakis, and in the view of Kudo (US Patent 5,179,557).

Regarding claim 1, Kanterakis discloses *a method of determining when to initiate a channel access comprising: initiating a channel access if at least one of the following has occurred: a timer associated with a transmit queue has expired; and a count associated with a transmit queue has exceeded a threshold* (Abstract, Col. 6, lines 40 – Col. 6, lines 5). Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold. Which has the same function as described in the abstract and paragraph [0030] of this instant application.

Art Unit: 2616

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Abstract). Each queue is associated with a counter and a timer (Fig. 9) and each queue has a priority class associated (Fig. 8, Col. 2, lines 46 –Col. 3, lines 5).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 4, Kanterakis discloses: *detecting a first packet stored into an empty queue; and starting a timer associated with the queue* (Col. 6, lines 43 – 44). The RNC buffers the first packet, which implies an empty buffer; and resets two timers.

Regarding claim 5, Kanterakis discloses: storing at least one packet in a queue; and maintaining a count of the amount of data in the queue (Col. 6, lines 43 – 52). The RNC buffers each packet and updates it buffer size denotes by the BCN counter value.

Regarding claims 2 and 3, Kanterakis discloses the threshold may be set for a *queue* (Col. 6, lines 40 – 52). The BNC counter value is associated with a buffer.

However, Kudo teaches a method where a threshold may be set for a plurality of queue (Fig. 9). Where the packet counter is associated with the threshold.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the threshold for a plurality of queues for distributing data buffer with high priority (Col. 2, lines 65 – 68).

Regarding claim 6, Kanterakis discloses *a method of selecting a transmit queue from a group of eligible transmit queues for transmission: determining if any of the eligible queues have a timer expired; selecting one of the queues having an expired timer if there is an eligible queue having an expired timer; otherwise, determining if any of the eligible queues have a count that exceeds a threshold; and selecting one of the queues having a count that exceeds the threshold if there is an eligible queue having a count that exceeds the threshold.* (Abstract, Col. 6, lines 40 – Col. 6, lines 5). Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold. Which has the same function as described in the abstract and paragraph [0030] of this instant application.

. The selection is based on certain events like timer expiration and counter exceed their threshold value as described by this instant application (Col. 6, lines 40 – Col 7, lines 5).

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Abstract). Each queue is associated with a counter and a timer (Fig. 9) and each queue has a priority class associated (Fig. 8, Col. 2, lines 46 –Col. 3, lines 5).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 7, Kanterakis discloses selecting a *non-empty queue* (Col. 6, lines 40 –41). The first receives packets implies that the queue was empty before it starts receive packets.

Regarding claim 8, Kanterakis discloses the method comprising: *detecting a first packet stored in a queue; and starting a timer associated with the queue* (Col. 6, lines 43 – 44). The RNC buffers the first packet, and resets two timers, which implies starting at least one timer associated with the queue.

Regarding claim 9, Kanterakis discloses *the method: storing at least one packet in a queue; and maintaining a count of the amount of data in the queue* (Col. 6, lines 40 – 52).

Regarding claim 10, Kanterakis discloses *the count represents an amount of at least one of packets and bytes* (Abstract). The BNC counter value represents the amount of buffered data.

Regarding claim 11, Kanterakis discloses *a method the selecting one of the queues having a count comprises selecting one of the queues having a greatest count* (Col. 7, lines 26 – 30). The BNC counter value exceeds the BCNX the MS sends all accumulated packets is considered as the queue having the greatest count.

Art Unit: 2616

Regarding claim 12, Kanterakis discloses *the method of selecting one of the queues having an expired timer comprises selecting the eligible queue having a timer that expired the longest ago* (Col. 6, lines 59 – 64). Where the base station transmits the oldest of the accumulated data.

Regarding claim 13, Kanterakis discloses *the method for selecting one of the queues having an expired timer comprises selecting the eligible queue having an expired timer that has the oldest data in the queue* (Col. 6, lines 59 –67).

Regarding claim 14, Kanterakis discloses *the method of selecting one of the queues having an expired timer comprises selecting the eligible queue having at least one of:*

an expired timer that has the oldest data in the queue; (Col. 6, lines 59 –67).

having a timer that expired the longest ago; (Col. 6, lines 59 – 64). Where the base station transmits the oldest of the accumulated data.

and a combination of an expired timer that has the oldest data in the queue and that expired the longest ago (Col.6, lines 59 – col. 7, lines 5).

Kanterakis does not disclose a plurality of queues. However, Kudo teaches a plurality of queue (Fig. 8).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group of selective queues for the

purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 15, Kanterakis discloses *a queue may be eligible based on comparing the queue and status of the queue to channel access rules* (Abstract). Where the channel access rules are timer expired and count exceeds a threshold.

Regarding Claim 16, Kanterakis discloses all the limitations of claim 16, except *queue eligibility is defined based on queues assigned to packets of a specified priority*.

However, Kudo teaches *queue eligibility is defined based on queues assigned to packets of a specified priority* (fig.8 and Col. 2, lines 31 –40).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to define the eligibility of a queue base on its specified priority for immediateness and discarding rate (Col. 2, lines 36 –37).

Regarding claim 17, Kanterakis discloses *a method comprising: determining when to initiate a channel access comprising: initiating a channel access if at least one of the following has occurred: a timer associated with a transmit queue has expired; and a count associated with a transmit queue has exceeded a threshold;* (Abstract, Col. 6, lines 40 – Col. 6, lines 5). Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold. Which has the same function as described in the abstract and paragraph [0030] of this instant application Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold.

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Abstract). Each queue is associated with a counter and a timer (Fig. 9) and each queue has a priority class associated (Fig. 8, Col. 2, lines 46 –Col. 3, lines 5).

The send packet decider selects a transmitting from an eligible transmit queues base on their class priority, their timer and the mount data contains on that queue.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kudo into the teaching of Kanterakis for transmitting a packet in packets queue on the basis of the stay time of each packet (Col. 5, lines 30 –35).

Regarding claim 18, Kanterakis discloses *a method of selecting a transmit queue from a group of eligible transmit queues for transmission: determining if any of the eligible queues have a timer expired; selecting one of the queues having an expired timer if there is an eligible queue having an expired timer; otherwise, determining if any of the eligible queues have a count that exceeds a threshold; and selecting one of the queues having a count that exceeds the threshold if there is an eligible queue having a count that exceeds the threshold.* Kanterakis discloses a method for selecting a packet eligible for transmission from a queue. The selection is based on certain events like timer expiration and counter exceed their threshold value as described by this instant application (Col. 6, lines 40 – Col 7, lines 5).

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Col. 5, lines 23 – 62).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 19, Kanterakis discloses a method for transmitting a packet from a buffer, determining if a queue has an expired timer and determining if any queue has a count exceeds the threshold. If a queue meets one of those requirements it is eligible for transmission (Col. 6, lines 40 – Col. 7, lines 5).

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Abstract). Each queue is associated with a counter and a timer (Fig. 9) and each queue has a priority class associated (Fig. 8, Col. 2, lines 46 –Col. 3, lines 5). Kudo teaches a method for transmission of data from a queue base on their priority rule as described by this instant application.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kudo into the teaching of Kanterakis for securing the transmission quality (Col. 3, lines 67 – Col. 4 lines 1).

Regarding claims 20 and 21, Kanterakis disclose an *apparatus comprising*:

a transceiver; (Fig. 2, 17 and Col. 5, lines 57 –59).

at least one transmit queue, each queue including a count indicating an amount of data in the queue, and a threshold; a timer associated with each of said transmit queue; and wherein the apparatus is adapted to initiate a channel access if the timer of one of the queues has expired or the count of one of the queues exceeds the threshold (Abstract). Kanterakis disclose at least a queue having BCN counter value representing the amount of buffered data and timer for calculation the expiration time. The RNC initiates a transmission in response to certain event including timer expiration and BNC count value exceeds a threshold.

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Abstract). Each queue is associated with a counter and a timer (Fig. 9) and each queue has a priority class associated (Fig. 8, Col. 2, lines 46 –Col. 3, lines 5).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brouwer (US Patent 6,760,303) discloses a Channel-type switching based on cell load.


Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dady Chery whose telephone number is 571-270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dady Chery 08/15/2007


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER

Application/Control Number: 10/634,417

Page 13

Art Unit: 2616